REMARKS

Claims 1-19 are pending. Claims 2 and 9-19 have been withdrawn as being directed to a non-elected invention.

Claims 1 and 3-8 are rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the written description requirement and the enablement requirement, and under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter of the invention. These rejections are addressed below.

Claim amendments

Claim 1 is amended to delete "for treating, reducing, or preventing a pathogenic infection" and to clarify the claim language regarding identifying the compound. Claims 7 and 16 are amended for clarity. No new matter is added by these amendments. Applicants reserve the right to pursue any cancelled subject matter in this or a continuing application.

Rejection under 35 U.S.C. § 112, first paragraph: written description

Claims 1 and 3-8 are rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the written description requirement. The Examiner asserts that the claims require identifying pathogens having pathways involving anthranilic acid and that these pathogens are not adequately described. The Examiner further asserts that the claims

relate to identifying vaccines and that immunoepitopes are not adequately described. Applicants respectfully traverse this rejection as applied to the presently amended claims.

As amended, claims 1 and 3-8 comply with the written description requirement. For completeness, applicants address the issues raised by the Examiner. First, contrary to the Examiner's assertion, the claimed invention does not require identifying a pathogen having pathways involving anthranilic acid. Amended claim 1 recites:

> 1. A method for identifying a compound, said method comprising:
>
> (a) contacting a pathogenic cell with a compound; and
>
> (b) measuring the production of a molecule selected from the group consisting of an 4-hydroxy-2-alkylquinoline (HAQ) molecule, 4-hydroxy-2-hepylquinoline (HHQ) molecule, or a derivative or precursor thereof in said cell,
>
> wherein said compound is identified as reducing production of said molecule relative to production of said molecule by a cell not contacted with said compound.

Next, the amended claims neither recite a step of identifying a pathogen nor require such a step. Rather, independent claim 1 requires identification of a compound that reduces "an 4-hydroxy-2-alkylquinoline (HAQ) molecule, 4-hydroxy-2-hepylquinoline (HHQ) molecule, or a derivative or precursor thereof." Identifying the type of pathogen or the pathways used by the pathogen is simply not a requirement of the claim. For example, if a pathogen does not use anthranilic acid (AA), then the production of AA in a control cell will be unmeasurable and the compound cannot further reduce production of AA, as required for a candidate compound in amended claim 1. Moreover, the specification describes numerous ways to measure production of a molecule (e.g., antimicrobial activity, *in vivo* methods, radioactive or non-radioactive binding assays,

competition assays, signaling assays, and chromatography, on p. 16, line 1 - page 19, line 9).

Furthermore, amended claim 1 no longer requires that the candidate compound treats, reduces, or prevents a pathogenic infection. As discussed above, the candidate compound reduces production of a molecule (e.g., anthranilic acid). As the amended claims no longer recite treatment of an infection, the rejection based on lack of disclosure of immunoepitopes is moot, and this basis for the rejection of claims 1 and 3-8 can now be withdrawn.

Rejection under 35 U.S.C. § 112, first paragraph: enablement

Claims 1 and 3-8 are rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the enablement requirement. The Examiner asserts that the claims required treating a pathogenic infection and that the specification lacks a correlation between anthranilic acid levels and treatment of a given type of infection. The Examiner further asserts that the specification provides functional limitations of the candidate compound but not structural limitations. The Examiner concludes that the claimed invention requires undue experimentation and is not enabled. Applicants respectfully traverse this rejection as applied to the presently amended claims.

As described above, the amended claims no longer require "treating, reducing, or preventing a pathogenic infection." For this reason alone, the rejection based on treating an infection is moot, and this basis of the rejection can be withdrawn.

Furthermore, the specification provides an enabling disclosure of the claimed invention. Here, the amended claims recite methods for identifying a compound by "measuring the production of a molecule selected from the group consisting of an 4-hydroxy-2-alkylquinoline (HAQ) molecule, 4-hydroxy-2-hepylquinoline (HHQ) molecule, or a derivative or precursor thereof." The specification provides numerous ways to measure such production of a molecule. Applicants' specification, for example, provides examples of compounds, such as a peptide, a polypeptide, a synthetic organic molecule, a naturally occurring organic molecule, a nucleic acid molecule, a peptide nucleic acid molecule, and a component or derivative thereof (p. 8, lines 1-5) useful in the claimed screening method. Applicants' specification also provides numerous types of screening protocols to measure production of a molecule (e.g., as described above and on p. 16, line 1 - page 19, line 9). Based on this disclosure, one of skill in the art would know practice the claimed method for identifying a compound without undue experimentation. The claimed screening method is straightforward. Applicants request that this rejection of claims 1 and 3-8 be withdrawn.

Rejection under 35 U.S.C. § 112, second paragraph

Claims 1 and 3-8 are rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter of the invention. The Examiner asserts that the claims omit the essential step of "determining whether the candidate compound treats or prevents a given pathogenic infection." In view of the

present claim amendment which omits such language, this basis of rejection should be withdrawn.

CONCLUSION

Applicants submit that that the claims are in condition for allowance, and such action is respectfully requested.

Enclosed is a Petition to extend the period for replying to the Office action for three months, to and including September 30, 2010, and authorization to deduct the required extension fee from Deposit Account No. 03-2095.

If there are any additional charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date: Sept 29, 2010

James D. DeCamp, Ph.D.
for Reg. No. 43,580

Helen S. Baca
Reg. No. 61,367

Clark & Elbing LLP
101 Federal Street
Boston, MA 02110
Telephone: 617-428-0200
Facsimile: 617-428-7045